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| EXAMINER SAFAIPOUR, BOBBAK | | | | |
| ART UNIT 2618 | | PAPER NUMBER | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/673,327

Applicant(s)

KITAZAWA ET AL.

Examiner

BOBBAK SAFAIPOUR

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5 and 9-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3, 5, 9-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

This Action is in response to Applicant's response filed on 01/23/2008. Claims 4 and 6-8 have been cancelled. New claims 10 and 11 have been added. **Claims 1-3, 5, and 9-11** are now pending in the present application. **This action is made FINAL.**

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by **Koo et al. (NPL- Capacity-Optimized Power Allocation Scheme in an Integrated Voice and Data DS-CDMA System; hereinafter Koo).**

Consider **claim 1**, Koo discloses a transmission power control method in a radio communication system comprises a base station and mobile stations, comprising:

determining that a communication to be transmitted from the base station to the mobile station is either real-time traffic (read as voice) or non-real time traffic (read as data traffic) based on at least one of a transmission delay (read as delay time), maximum retransmission count and reception error rate (read as quality of service (QoS) usually given in the form of BER

or PER) corresponding to the communication (col. 1, "Introduction" 2nd paragraph; col. 2, "Introduction" 4th paragraph; Maximizing the throughput of the data traffic while guaranteeing the pre-determined QoS of voice users.);

determining a transmission power required for radio communication between the base station and the mobile stations (col. 1, "Abstract"; Allocating transmission power of the data user to be less than that of voice users.);

setting a transmission power margin level added to the transmission power to a first value if the communication is real-time traffic and a second value is the communication is non-real time traffic, wherein the first value is greater than the second value (col. 1, "Abstract"; col. 1, 2nd paragraph of "Introduction"; col. 2, 4th paragraph of "Introduction"; Allocating the transmission power of the data users to be half of that of voice users.); and

transmitting the communication from the base station to the mobile station based on the transmission power margin set in the setting (col. 1, "Abstract").

Consider **claim 3**, Koo discloses a communication device, comprising:

means for determining that a communication to be transmitted from the base station to the mobile station is either real-time traffic (read as voice) or non-real time traffic (read as data traffic) based on at least one of a transmission delay (read as delay time), maximum retransmission count and reception error rate (read as quality of service (QoS) usually given in the form of BER or PER) corresponding to the communication (col. 1, "Introduction" 2nd paragraph; col. 2, "Introduction" 4th paragraph; Maximizing the throughput of the data traffic while guaranteeing the pre-determined QoS of voice users.);

means for determining a transmission power required for radio communication between the base station and the mobile stations (col. 1, “Abstract”; Allocating transmission power of the data user to be less than that of voice users.);

means for setting a transmission power margin level added to the transmission power to a first value if the communication is real-time traffic and a second value is the communication is non-real time traffic, wherein the first value is greater than the second value (col. 1, “Abstract”; col. 1, 2nd paragraph of “Introduction”; col. 2, 4th paragraph of “Introduction”; Allocating the transmission power of the data users to be half of that of voice users.); and

means for transmitting the communication from the base station to the mobile station based on the transmission power margin set in the setting (col. 1, “Abstract”).

Consider **claim 10**, Koo discloses a base station, comprising:

a determining unit configured to determine that a communication to be transmitted from the base station to the mobile station is either real-time traffic (read as voice) or non-real time traffic (read as data traffic) based on at least one of a transmission delay (read as delay time), maximum retransmission count and reception error rate (read as quality of service (QoS) usually given in the form of BER or PER) corresponding to the communication (col. 1, “Introduction” 2nd paragraph; col. 2, “Introduction” 4th paragraph; Maximizing the throughput of the data traffic while guaranteeing the pre-determined QoS of voice users.);

a transmission power determining unit configured to determine a transmission power required for radio communication between the base station and the mobile stations (col. 1, “Abstract”; Allocating transmission power of the data user to be less than that of voice users.);

setting unit configured to set a transmission power margin level added to the transmission power to a first value if the communication is real-time traffic and a second value is the communication is non-real time traffic, wherein the first value is greater than the second value (col. 1, “Abstract”; col. 1, 2nd paragraph of “Introduction”; col. 2, 4th paragraph of “Introduction”; Allocating the transmission power of the data users to be half of that of voice users.); and

a transmitter transmitting the communication from the base station to the mobile station based on the transmission power margin set in the setting (col. 1, “Abstract”).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 5, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Koo et al. (NPL- Capacity-Optimized Power Allocation Scheme in an Integrated Voice and Data DS-CDMA System; hereinafter Koo)** in view of **Wang et al. (US 5,933,763; hereinafter Wang)**.

Consider **claim 2**, Koo discloses a transmission power control method in a radio communication system comprising a base station and mobile stations, the method comprising:

determining a transmission power required to satisfy a predetermined reception error rate (read as quality of service (QoS) usually given in the form of BER or PER) required for radio communication between the base station and the mobile stations (col. 1, "Introduction" 2nd paragraph; col. 2, "Introduction" 4th paragraph; Allocating transmission power of the data user to be less than that of voice users.);

setting a transmission power margin level added to the required transmission power (col. 1, "Abstract"; col. 1, 2nd paragraph of "Introduction"; col. 2, 4th paragraph of "Introduction"; Allocating the transmission power of the data users to be half of that of voice users.).

Koo fails to specifically disclose where data retransmission is allowed in radio communication between the base station and the mobile stations and that the added transmission

power margin level increases as the data retransmission count in an uplink or in a downlink increases.

In related art, Wang discloses where data retransmission is allowed in radio communication between the base station and the mobile stations (abstract); and that the added transmission power margin level increases as the data retransmission count in an uplink or in a downlink increases (col. 4, lines 46-57; If reception of the paging signal is not acknowledged, the paging signal is retransmitted at an increased power level.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Wang into the teachings of Koo to increase the probability of successful communication of the signal.

Consider **claim 5**, Koo discloses communication device, comprising:

means of determining a transmission power required for satisfying a communication service quality (read as quality of service (QoS) usually given in the form of BER or PER) required for radio communication with other communication devices (col. 1, "Introduction" 2nd paragraph; col. 2, "Introduction" 4th paragraph; Allocating transmission power of the data user to be less than that of voice users.); and

means of allocating a radio resource based on the determined transmission power and transmitting data using said radio resource, (col. 1, "Abstract"; col. 1, 2nd paragraph of "Introduction"; col. 2, 4th paragraph of "Introduction");

margin setting means for setting a transmission power margin level added to the transmission power (col. 1, "Abstract"; col. 1, 2nd paragraph of "Introduction"; col. 2, 4th

paragraph of “Introduction”; Allocating the transmission power of the data users to be half of that of voice users.); and

transmission power determination means for determining a transmission power based on the set transmission power margin and said required transmission power (col. 1, “Abstract”).

Koo fails to specifically disclose where data retransmission is allowed via said radio communication; retransmission count storing means for counting a retransmission count when a same data is retransmitted and storing said retransmission count and increasing the transmission power margin as said retransmission count increases (col. 4, lines 46-57; If reception of the paging signal is not acknowledged, the paging signal is retransmitted at an increased power level.).

In related art, Wang discloses where data retransmission is allowed via said radio communication (abstract); retransmission count storing means for counting a retransmission count when a same data is retransmitted and storing said retransmission count; and increasing the transmission power margin as said retransmission count increases (col. 4, lines 46-57; If reception of the paging signal is not acknowledged, the paging signal is retransmitted at an increased power level.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Wang into the teachings of Koo to increase the probability of successful communication of the signal.

Consider **claim 9**, Koo discloses a radio communication system comprising a base station and a mobile station, wherein both said base station and said mobile station comprise:

means for determining a transmission power required to satisfy a service quality (read as quality of service (QoS) usually given in the form of BER or PER) required for radio communication between the base station and the mobile station (col. 1, "Introduction" 2nd paragraph; col. 2, "Introduction" 4th paragraph; Allocating transmission power of the data user to be less than that of voice users.);

margin setting means for setting a transmission power margin level added to the transmission power (col. 1, "Abstract"; col. 1, 2nd paragraph of "Introduction"; col. 2, 4th paragraph of "Introduction"; Allocating the transmission power of the data users to be half of that of voice users.); and

transmission power determination means for determining a transmission power based on the set transmission power margin and said required transmission power (col. 1, "Abstract").

Koo fails to specifically disclose retransmission count storing means for counting a retransmission count when a same data is retransmitted between the base station and mobile station and storing said retransmission count; and increasing the transmission power margin as said retransmission count increases.

In related art, Wang discloses retransmission count storing means for counting a retransmission count when a same data is retransmitted between the base station and mobile station and storing said retransmission count and increasing the transmission power margin as said retransmission count increases (col. 4, lines 46-57; If reception of the paging signal is not acknowledged, the paging signal is retransmitted at an increased power level.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Wang into the teachings of Koo to increase the probability of successful communication of the signal.

Consider **claim 11**, Koo discloses a base station, comprising:

a determining unit configured to determine a transmission power required to satisfy a predetermined reception error rate (read as quality of service (QoS) usually given in the form of BER or PER) required for radio communication between the base station and the mobile stations (col. 1, "Introduction" 2nd paragraph; col. 2, "Introduction" 4th paragraph; Allocating transmission power of the data user to be less than that of voice users.); and

a setting unit configured to set a transmission power margin level added to the required transmission power (col. 1, "Abstract"; col. 1, 2nd paragraph of "Introduction"; col. 2, 4th paragraph of "Introduction"; Allocating the transmission power of the data users to be half of that of voice users.).

Koo fails to specifically disclose that the added transmission power margin level increases as the data retransmission count in an uplink or in a downlink increases.

In related art, Wang discloses that the added transmission power margin level increases as the data retransmission count in an uplink or in a downlink increases (col. 4, lines 46-57; If reception of the paging signal is not acknowledged, the paging signal is retransmitted at an increased power level.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Wang into the teachings of Koo to increase the probability of successful communication of the signal.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipoor whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Bobbak Safaipoor/

Examiner, Art Unit 2618

April 12, 2008

/Matthew D. Anderson/

Supervisory Patent Examiner, Art Unit 2618